Date: Sun, 28 Feb 93 13:59:55 PST
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>
Errors-To: Info-Hams-Errors@UCSD.Edu
Reply-To: Info-Hams@UCSD.Edu
Precedence: Bulk
Subject: Info-Hams Digest V93 #268
To: Info-Hams

Info-Hams Digest Sun, 28 Feb 93 Volume 93 : Issue 268

Today's Topics:
FORGET THE CW HELP BRUNO - GET A DICTIONARY INSTEAD! (2 msgs)
Ground planes and vertical dipoles (2 msgs)
HELP QRP Tx/Rx kit wanted !!
Municipalities can restrict antennas? (2 msgs)
Soldering PL259's (2 msgs)

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Thu, 25 Feb 1993 18:32:53 GMT
From: sdd.hp.com!col.hp.com!news.dtc.hp.com!hpscit.sc.hp.com!hplextra!hpcc05!
hpldsla!brunob@network.UCSD.EDU
Subject: FORGET THE CW HELP BRUNO - GET A DICTIONARY INSTEAD!
To: info-hams@ucsd.edu

Thank you Jeff for your comments and H E L P !!
I do apriceatt werry mach.
Riggards
Bruno

P.S. I was told, that I'm the only ham who has an accent on CW.

Date: 28 Feb 93 19:49:46 GMT
From: swrinde!gatech!darwin.sura.net!spool.mu.edu!olivea!apple!
kchen@network.UCSD.EDU

Subject: FORGET THE CW HELP BRUNO - GET A DICTIONARY INSTEAD!
To: info-hams@ucsd.edu

brunob@hpldsla.sid.hp.com (Bruno Bienenfeld) writes:

>Thank you Jeff for your comments and H E L P !!
>I do apriceatt werry mach.
>Riggards
>Bruno
>
>P.S. I was told, that I'm the only ham who has an accent on CW.

Now, now, Bruno, don't be so humble. Many of us in the SCV often
can't avoid stumbling on AA6AD's FB signal patiently working inside
the Novice subbands at sub-5wpm speeds; and then popping up in the
Extra portion of the band going at break-neck speeds. Nothing wrong
with Bruno's code at all. I'll bet the Novices who snagged a contact
with a kind OT wouldn't think so.

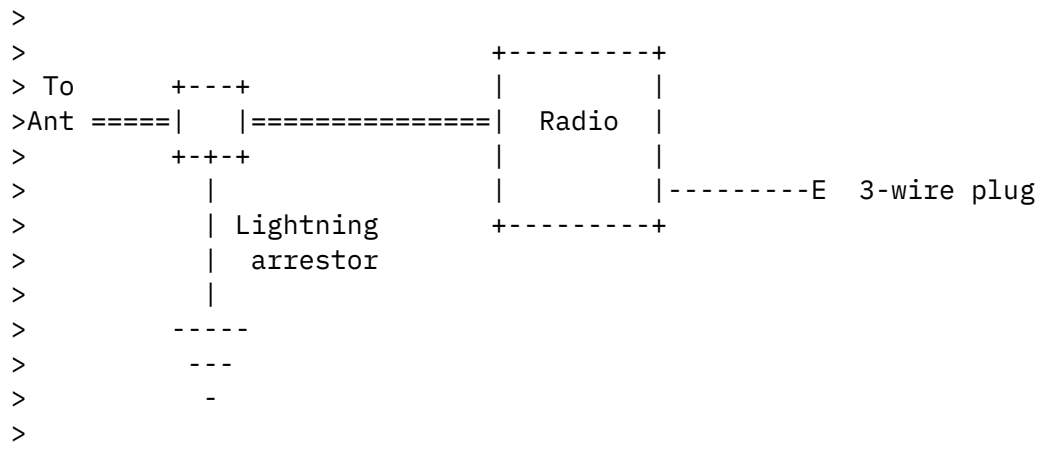
To the NH6 with the stuck caps-lock: Bruno has been posting here
(in the same style :-) for longer than I can remember. You earn
the distinction for being the first one to complain.

73,

Kok Chen, AA6TY kchen@apple.com
Apple Computer, Inc.

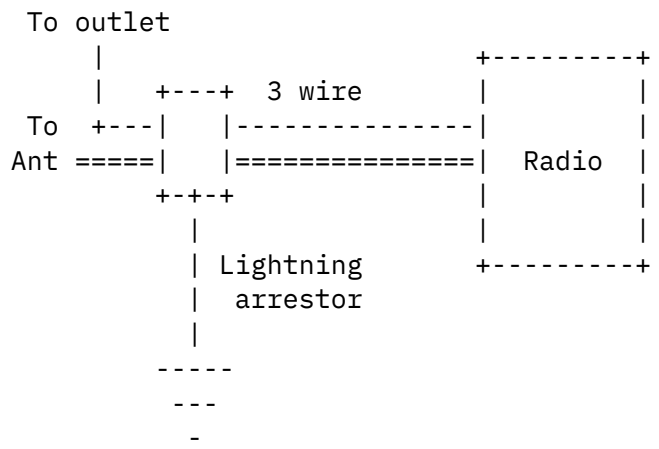
Date: Sun, 28 Feb 1993 14:58:14 GMT
From: swrinde!zaphod.mps.ohio-state.edu!howland.reston.ans.net!
europa.eng.gtefsd.com!emory!rsiatl!ke4zv!gary@network.UCSD.EDU
Subject: Ground planes and vertical dipoles
To: info-hams@ucsd.edu

In article <C32wyo.Hoz@icon.rose.hp.com> greg@core.rose.hp.com (Greg Dolkas)
writes:
>
>If you have both an earth ground (at the lightning arrestor) and a 3-wire
>plug safety ground at the tranceiver, couldn't you get quite a ground loop
>current going with a non-ground-potential safety ground? I expect that
>would at least cause your ground rod to dissolve with electrolytic action,
>not to mention the safety issue.
>
>I assume your case example was a severe one, and I shouldn't be paranoid,
>but it is probably worth asking if my configuration is correct...



>Note that the shield of the antenna coax is connected to the ground rod.

Yes, this is a ground loop waiting to happen. You want it to look
like this instead;



This is common point grounding. The 3rd wire ground is attached to station
ground and continued to the power box ground. Now there can't be a ground
loop through your equipment because all cables are at equal potential at
the common point.

Gary
--

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534 Shannon Way | Guaranteed! | emory!kd4nc!ke4zv!gary
Lawrenceville, GA 30244 | |

Date: Sun, 28 Feb 1993 14:18:41 GMT
From: swrinde!gatech!emory!rsiatl!ke4zv!gary@network.UCSD.EDU

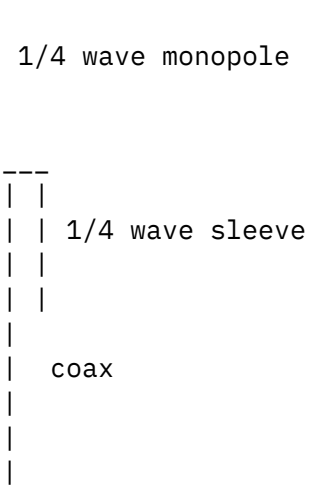
Subject: Ground planes and vertical dipoles
To: info-hams@ucsd.edu

In article <14570659@hpnmdla.sr.hp.com> alanb@hpnmdla.sr.hp.com (Alan Bloom) writes:
>In rec.radio.amateur.misc, gary@ke4zv.uucp (Gary Coffman) writes:
>
>Gary gave an excellent overview of grounding. I just had two points:
>
>>Real earth ground connections serve two primary purposes. The most
>>important is as an electrical safety ground for power line and lightning
>>currents. These currents are referenced to the Earth by Nature in the
>>case of lightning, and by the power company in the case of the electrical
>>safety ground.
>
>Very true ... however:
>
>Awhile back I found to my surprise that power company ground and earth
>ground can be very different when things aren't working right.
>To make a very long story short, my house had about 60 volts AC on the
>"safety" ground and neutral wires EVEN WITH THE HOUSE MAIN BREAKER
>PULLED! After considerable investigative work, it turned out a
>neighbor, on the same pole transformer, had a defective 220V well
>pump. One side of the 220 line was shorted to the pump housing which
>was well-grounded to earth. In effect, the "ground" reference of
>the pole transformer was about halfway between center tap and one
>end, instead of at the center tap where it should be. I could get
>a big, fat spark (about 4A of current) by connecting a wire between
>my fuse box chassis and a separate 8 ft ground rod.
>
>The moral of the story is: use a 3-wire plug on your ham equipment
>to safety-ground the chassis. Do not depend on a separate earth
>ground. The tower/coax should be grounded to earth ground at some
>point before the coax enters the house (for ligtning protection).

No, actually the moral of this story is to make sure your service entrance wiring is in compliance with the NEC. The NEC says that your entrance breaker box must be grounded with a #8 wire to a good earth ground, minimum of a made ground consisting of an 8 foot rod. Sounds like your neighbor's box isn't grounded properly either or the fault should have blown the pump breaker in his panel. There are two problems here, the potential shock hazard from the ground fault, and the fact that you and your neighbor have been paying the power company for that ground current draw. It's been passing through one or both of your meters for as long as the fault has been present.

Now using the third wire connection wouldn't solve this problem,

it just generates another, a ground loop *through* your equipment
from the floating neutral in your power box to the amateur RF ground
system. That's bad, and potentially damaging to your equipment and
you.

>>... a vertical sleeve dipole
>


>
>>The sleeve acts as 1/2 of the dipole, and also serves to decouple
>>the coax from RF. No Earth ground is required. At VHF you can make
>>quick portable antennas like this by simply rolling back a quarterwave
>>section of braid from a piece of coax.
>
>I have found this doesn't work well at all. The sleeve decouples
>much better if the diameter of the sleeve is much greater than the
>diameter of the coax. And it works better still of the sleeve is
>cone-shaped (small at the top, large at the bottom.) This is the
>approach taken by the Isopole antenna.

I've found this design to be quite acceptable. Hustler did too since
they used to offer it commercially. The coax decoupling isn't as good
as with dual cones, but you get a true dipole radiation pattern from
the antenna since the sleeve is the lower half of the dipole. The
pattern is more symetric than a J-pole and the antenna is mechanically
easier for the home builder to construct than the Isopole.

In the Hustler design, they used a hollow mast to conduct the coax to
the center of the antenna. This, of course, completely shielded the
coax from the near field and supplied mechanical support to the antenna,
but the mast could then become the unintended radiator. It's exposed
at the minimum current node, however, and doesn't seem to be a problem. A
toroid donut at that point should make it really clean, but I haven't
noticed any real difference in performance with or without a toriod.

Gary
--
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534 Shannon Way | Guaranteed! | emory!kd4nc!ke4zv!gary
Lawrenceville, GA 30244 | |

Date: Sun, 28 Feb 93 16:45:15 GMT
From: usc!howland.reston.ans.net!paladin.american.edu!news.univie.ac.@!hp4at!
mcsun!sun4nl!bsoatr!bsdihi!dihi@network.UCSD.EDU
Subject: HELP QRP Tx/Rx kit wanted !!
To: info-hams@ucsd.edu

HELP

After about 5 years of non-radio activity the virus is starting to work again.
I found my CW key about a week ago. The poor key was damaged and the cover
full of scratches. I refurbished my key and it looks great again.

Unfortunately i dont have any equipment for HF at present to connect my
CW key to..
So I started reading the HAM magazines from last year to see what is
available on the market. That is a lot but.. also very expensive. What
happened to the YEN??

Anyway to build my own small QRP/CW tx/rx looks a lot more fun and is much
less expensive. I called some HAM shops arount to ask whether there was
a kit available something like the 'good old Heathkit HW-8'. But... got
a No everywhere. No tx/rx kits anymore in Holland....

I hope this situation is not the same everywhere in the world, and I hope
that somebody can give me an advise where to look for a QRP Tx/Rx CW kit!

The Key is ready, next week the FD-4 is waiting so... what in between??

73's

Dick Hissink PA3DSP
Email:dihi@bsdihi.atr.bso.nl

Date: 28 Feb 93 20:26:47 GMT
From: mvb.saic.com!unogate!news.service.uci.edu!ucivax!gateway@network.UCSD.EDU
Subject: Municipalities can restrict antennas?
To: info-hams@ucsd.edu

(Thanks a lot Dan!)

I have located the case that a local attorney referred to. It is rather bad news for anyone in the 9th Federal Circuit (here in CA.), it says no ham has a "right" under PRB-1 to an antenna - it specifically denied attorney's fees to a litigant [who won on the antenna question] claiming he had been denied Constitutional rights by the local municipality. There is strong language in the case alluding to municipality having nearly all the power in these situations, even under PRB-1. However, it only specifically addresses the right to attorney's fees under UCS 1983, and denies them. This case is 91 DAR 7170 (1991). The direct result is that you may need a lot of money to fight a municipality on an antenna problem, and you can't recover that money in a Federal Court here in the 9th circuit. Ick!

73

.....

Clark Savage Turner, Graduate Student Researcher
Safety Critical Software Group home:
Department of Info. and Computer Science 1514 Verano Place
Irvine, CA. 92717 Irvine, CA. 92715
(714) 856 4049 (714) 856 2131

WA3JPG, QRP #3526, active on HF, VHF and UHF.
Admitted to practice law in California, Massachusetts, and New York.
ARRL Volunteer Counsel

Date: Sun, 28 Feb 1993 21:38:32 GMT
From: usc!howland.reston.ans.net!spool.mu.edu!yale.edu!ira.uka.de!math.fu-berlin.de!news.netmbx.de!Germany.EU.net!mcsun!news.funet.fi!aton.abo.fi!usenet@network.UCSD.EDU
Subject: Municipalities can restrict antennas?
To: info-hams@ucsd.edu

In <9302281226.aa12479@Paris.ics.uci.edu> turner@safety.ICS.UCI.EDU writes:

> (Thanks a lot Dan!)
>

> I have located the case that a local attorney referred to. It is rather
> bad news for anyone in the 9th Federal Circuit (here in CA.), it says
> no ham has a "right" under PRB-1 to an antenna - it specifically denied
> attorney's fees to a litigant [who won on the antenna question] claiming
> he had been denied Constitutional rights by the local municipality.
> There is strong language in the case alluding to municipality having
> nearly all the power in these situations, even under PRB-1. However,
> it only specifically addresses the right to attorney's fees under
> UCS 1983, and denies them. This case is 91 DAR 7170 (1991). The direct
> result is that you may need a lot of money to fight a municipality on
> an antenna problem, and you can't recover that money in a Federal Court
> here in the 9th circuit. Ick!
>
> 73
>
> .....
>
> Clark Savage Turner, Graduate Student Researcher
> Safety Critical Software Group home:
> Department of Info. and Computer Science 1514 Verano Place
> Irvine, CA. 92717 Irvine, CA. 92715
> (714) 856 4049 (714) 856 2131
>
> WA3JPG, QRP #3526, active on HF, VHF and UHF.
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How interesting, here in OH-country the Supreme Court recently ruled that ham radio antennas are temporary installations and are not restricted by city zoning rules. On private property one needs no permit as long as the tower does not present danger to air traffic, of course assuming you are the owner or have landlord's permission... Ruling is based on the idea that even tower, not to mention GP's or wire antennas, are "temporary installations" and thus need no permit.

BTW, the "temporary installation" in question was a tower in 100 ft class :)

73 Mika

Mika Suoranta, Leirikatu 11, FIN-20360 Turku, Finland, phone +358-21-382637

Turku School of Economics, Department of Economics, FIN-20500 Turku, Finland
Internet e-mail MSUORANTA@FINABO.ABO.FI Packet Radio OH1NZQ@OH1RBU.FIN.EU

Date: Sun, 28 Feb 1993 14:50:54 GMT
From: swrinde!zaphod.mps.ohio-state.edu!howland.reston.ans.net!
europa.eng.gtefsd.com!emory!rsiatl!ke4zv!gary@network.UCSD.EDU
Subject: Soldering PL259's
To: info-hams@ucsd.edu

In article <1167@arrl.org> zlau@arrl.org (Zack Lau) writes:
>In rec.radio.amateur.misc, yanagi@32799.enet.dec.com (32799::yanagi) writes:
>
>Anyone have any practical ideas for preventing water from condensing
>inside 9913? I know the broadcast stations pressurize their cables
>with dry gas, but don't know of amateurs going through this trouble.
>Keeping it a high enough temperature might work (above the dew point),
>but this doesn't seem to be any easier, unless you live in Hawaii :-).
>Another solution would be keeping it in an extremely cold place where
>it never gets warm enough for water to condense (Greenland??). Or is
>this cable just not practical outdoors where the weather constantly
>changes?
>
>I don't believe N connectors have gas tight seals.

You're right Zack. The best you can do is assemble your cables on
a dry day and use a grease seal on the cable before assembly. A
glob of grease down the inner tube will stop air incursion, but
it will cause a small impedance bump.

Gary

--
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Lawrenceville, GA 30244 | |

Date: Sun, 28 Feb 1993 13:51:00 GMT
From: swrinde!gatech!emory!rsiatl!ke4zv!gary@network.UCSD.EDU
Subject: Soldering PL259's
To: info-hams@ucsd.edu

In article <14570658@hpnmdla.sr.hp.com> alanb@hpnmdla.sr.hp.com (Alan Bloom)
writes:
>In rec.radio.amateur.misc, gary@ke4zv.uucp (Gary Coffman) writes:
>
>>Ok, I part company here. I find it best to go ahead and cut everything
>>to length before tinning the braid. ...
>
>I used to do that. The problem is it's very hard not to disturb the
>flat "lie" of the braid, both when removing the outer insulation and
>during the soldering process. By leaving all the braid in place and
>then cutting off the excess AFTER soldering, you are also cutting off
>the frayed ends that make it hard to screw the coax into the PL-259.

If you use a very sharp knife, and cut through outer insulation, braid,
and inner insulation in one cut, you'll avoid the frayed end problem.
Cutting tinned braid cleanly is much harder unless you use a pipe cutter
or hacksaw. Pipe cutters tend to compress and damage the inner insulation
and hacksaws leave a bunch of chips to clean out of the cable. You can
nibble at it with a pair of sidecutters, but a quick slice with a sharp
knife works best for me.

On another note, when cutting braid for crimp connectors, I use a heavy
pair of electrican's scissors rather than dikes. They cut much cleaner.

Gary

--
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Lawrenceville, GA 30244 | |

Date: Sun, 28 Feb 1993 14:47:19 GMT
From: swrinde!gatech!emory!rsiatl!ke4zv!gary@network.UCSD.EDU
To: info-hams@ucsd.edu

References <1993Feb24.124929.9856@edinboro.edu>, <C326LK.CG6@hpuerca.atl.hp.com>,
<111533@netnews.upenn.edu>%
Reply-To : gary@ke4zv.UUCP (Gary Coffman)
Subject : Re: HELP! SATELLITE TV DESCRAMBLER

In article <111533@netnews.upenn.edu> yee@mipg.upenn.edu (Conway Yee) writes:
>>Technological infrastructure is expensive. No body can afford to
>>give it away. IMHO.
>
>I agree but this raises an interesting question.

>
>Question: Was there an expense in setting up AM/FM/TV broadcast?
>Answer: Yes.
>
>Question: Why is AM/FM/TV broadcast free?
>Answer: the costs are covered by advertising.
>
>Question: Is there an expense in setting up cable/satellite broadcast?
>Answer: Yes.
>
>Question: Why isn't the cost of this infrastructure paid for by advertising?
>Answer: ?
>
>The times have certainly changed.

Indeed. You pose a complex question. Cable is operated as a direct
viewer supported service because it is in essence narrowcasting
instead of broadcasting. It offers many choices, but few or none
of them have a large enough audience share to attract major advertising
dollars. Thus the burden of payment falls directly on the consumer of
the service rather than through an intermediary advertiser who passes
along his advertising costs to the consumer through higher pricing of
his goods.

If you think the quality of broadcast TV has deterioriated, you'd be
correct. That's mainly because cable has diluted the audience so that
broadcast doesn't have the attraction to advertisers it once had, and
thus doesn't have the money it once had to produce programming. Couple
to that also that broadcasters by definition have to try to appeal to
the largest mass audience without offending any, so any specific program
is going to be less satisfactory to audiences than narrowcast programs
tailored specifically for a specific target audience. In other words,
bland pap for the lowest common denominator that won't offend minority
interest viewers is broadcast's stock and trade. Before cable, there
was no alternative to broadcast, and broadcasters could afford to
alienate certain small audience segments because they had nowhere else
to turn, _All in the Family_ and _Laugh In_ are examples of the broadcaster
being daring. Today cable has given the audience many alternatives and the
broadcaster must play it safer than ever to hold onto as much of the audience
as possible. Many local stations have turned to news, and news like programs
called infotainment, to try to fill that niche. As you know, it's mostly
garbage. The times certainly have changed, and not for the better in most
cases.

Gary
--
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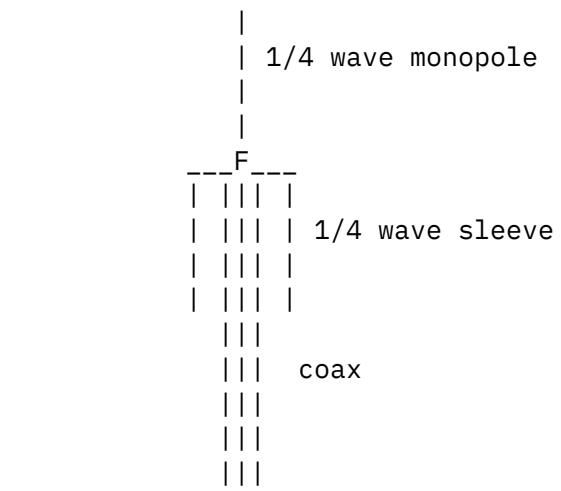
Date: Sun, 28 Feb 1993 14:29:08 GMT
From: swrinde!gatech!emory!rsiatl!ke4zv!gary@network.UCSD.EDU
To: info-hams@ucsd.edu

References <111010@netnews.upenn.edu>, <1993Feb24.154032.10478@ke4zv.uucp>,
<randall.730761317@seashore>
Reply-To : gary@ke4zv.UUCP (Gary Coffman)
Subject : Re: Ground planes and vertical dipoles

In article <randall.730761317@seashore> randall@informix.com (Randall Rhea)
writes:
>gary@ke4zv.uucp (Gary Coffman) writes:
>
>>


>
>>The sleeve acts as 1/2 of the dipole, and also serves to decouple
>>the coax from RF. No Earth ground is required. At VHF you can make
>>quick portable antennas like this by simply rolling back a quarterwave
>>section of braid from a piece of coax. The inner becomes the monopole
>>and the rolled back braid becomes the sleeve. If you make a small loop
>>in the end of the inner, you can tie a string there to hang the antenna.
>>This design will also work at lower frequencies, but becomes rather long
>>and requires a tall tree as a hanger.
>
>How does this antenna compare to a J-pole?

This antenna has a cleaner pattern, but slightly less gain. Let me
give a construction tip or two for a mast mount version. In the drawing,
the coax should be inside a hollow mast pipe. The pipe should be the
proper diameter to fit a single hole female coax fitting, SO-239 or type N,

in a pipe cap. The monopole is simply a rod soldered into a male connector and screwed on. The sleeve is a piece of pipe 1/4 inch larger in inner diameter than the mast's outer diameter. It has a cap with a hole that allows it to slip down over the exposed female connector. A thin jam nut is applied to the female connector to hold the sleeve in place. I'd use copper pipe and solder on caps, but it can be constructed from black pipe. If so, the holes in the caps can be threaded for the female connector and the jam nuts eliminated.

Gary
--

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Destructive Testing Systems	we break it.	uunet!rsiatl!ke4zv!gary
534 Shannon Way	Guaranteed!	emory!kd4nc!ke4zv!gary
Lawrenceville, GA 30244		

Date: 28 Feb 93 17:59:18 GMT
From: sdd.hp.com!ux1.cso.uiuc.edu!bradley.bradley.edu!camelot!darknite@network.UCSD.EDU
To: info-hams@ucsd.edu

References <C350A8.5H1@zoo.toronto.edu>, <darknite.730869070@camelot>, <1mpuujINN8ub@access.digex.com>
Subject : Re: Info needed on GPS

In <1mpuujINN8ub@access.digex.com> bote@access.digex.com (John Boteler) writes:

>darknite@camelot.bradley.edu (John S. Novak III) writes:
>>which blows your accuracy even more. We also have problems due
>>to atmospheric interference (ionosphere and troposphere) and
>>multipath.

>I am curious as to how large a degradation the atmospheric anomalies
>cause on a satellite-to-water-vessel path.

Okay, the main atmospheric delays are ionospheric and tropospheric. The ionospheric delays are caused due to the ionized gas molecules in the air, and are larger during the day than at night. The troposhperic is just the lumped effects of air components in the strato- and troposphere.

The ionospheric errors are roughly 5 to 10 meters, rms error, and as I said earlier, are global (or very nearly so) in effect.

The tropospheric errors are _not_ global, contrary to what I said earlier (I reviewed my notes) and I was never informed as to

their magnitude. I'm going to SWAG in the area of 10 meters, but
that's just a guess. I can try find out, though, and post the
information Monday or Tuesday. The tropospheric delays are
'correctible' though. I'm not going to post the algorithms,
though, as they are complex, and filled with subscripts not
amenable to ASCII...

The screwed ephemis data is 10 to 20 meters, thtough, and is the
biggest problem.

>I assume that the constellation is sufficiently dense to
>allow three or four satellites to lie on paths forming large
>angles with respect to the atmospheric layers, so reflections
>leading to multiple paths would seem to be negligible. Are problems
>caused by propogation delays arising from the various atmospheric
>densities? Something else?

I am unsure of the current satellite density over the globe, but
over the continental US, there should always be 5 to 7 sats in
line of sight, so you can choose the best geometry for your
application. In other areas, there should always be at least 3
sats in sight (which gives longitude and latitude data, but not
altitude) if not 4 or 5.

I was stuck in land-bound mode of thinking, so I mentioned
multi-path out of reflex. My toys (well, the department's
toys...) are all in the middle of Peoria, Illinois... :-)
I can't think of a significant source of multipath out on the
waters. On the other hand, differential applications will become
more difficult as you move farther away from your base station.

>Also, I am curious as to the sources of multi-path interference
>on a path from an orbiting satellite and an unobstructed
>water vessel.

>"...GPS is NOT an operational system...signed Commander, United
>States Coast Guard. Out."

>Cheers.

>--
>bote@access.digex.com (John Boteler)
>"Why, in an ESS of this size it would take five, six minutes to trace a call!"
--
MS: "This [a soddering iron] is good for thawing locks out."
TL: "Yeah, its good for finding gas leaks, too"
          -Matthew Schirmacher and Tim Lister, 12-03-91
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End of Info-Hams Digest V93 #268
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